

## METHOD FOR DETERMINING NOISE IN RADIOGRAPHY

## ABSTRACT OF THE DISCLOSURE

In order to model a fluoroscopic noise present in a radiography operation, two successive images of a same zone are used so that it is possible to pair the dots of the two images as a function of the zone of the space that they represent. The pairs of dots are grouped in sub-groups according to their gray level. For each sub-group, the mean standard deviation  $\sigma$  of the  $P_i(x, y) - P_{i-1}(x, y)$  values is computed. A sub-group is discriminated by eliminating the dots for which  $P_i(x, y) - P_{i-1}(x, y)$  is greater than the mean of the values  $P_i(x, y) - P_{i-1}(x, y)$  plus  $k$  times the mean standard deviation. These computations are repeated a certain number of times. Once the sub-group is discriminated, its centering is assessed. A sub-group is non-centered if its mean is greater than 1.5 times its mean standard deviation. Pairs of dots  $(v, \sigma)$  are then obtained. From these dots, an iterative regression is performed to obtain a model of noise according to  $\sigma(v) = \alpha \cdot \sqrt{v} + \beta \cdot v + \gamma$ , where  $v$  is the gray level and  $\alpha$ ,  $\beta$  and  $\gamma$  are coefficients defining the noise.